

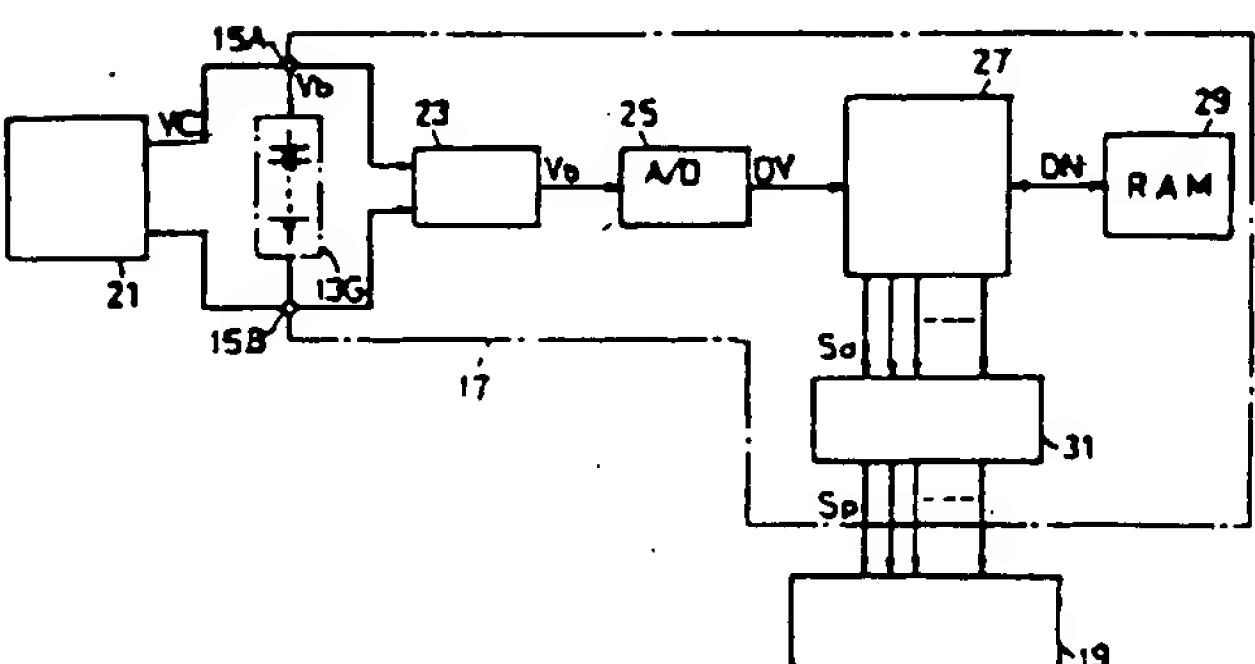
H01M10/44

(54) SECONDARY BATTERY PACK

- (11) 4-267077 (A) (43) 22.9.1992 (19) JP
 (21) Appl. No. 3-27372 (22) 21.2.1991
 (71) SONY CORP (72) TAKAKASHI AYUKAWA
 (51) Int. Cl.⁵ H01M10/44, H01M10/48

PURPOSE: To facilitate control and maintenance by performing power supply and charge under the condition that batteries are housed in a case, and displaying the number of times of charge automatically.

CONSTITUTION: In the case that a battery-contained pack is installed to a charging device 21 for charge, the charge voltage V_c is applied to electrode terminals 15A, 15B, and a battery main frame 13G is charged with the voltage V_b . A V_b value of this time is detected by a voltage detecting unit 23 to sense a start and an end of charge, and each time of end, count is performed to be added for display in a charge frequency display unit 19 by a driving circuit unit 31. Accurate total number of times of charge is thereby detected automatically to facilitate maintenance and control.



17: charge condition detecting circuit forming unit, 25: A/D converting unit, 27: control unit

(54) COMBINED BATTERY AND CHARGING METHOD THEREOF

- (11) 4-267078 (A) (43) 22.9.1992 (19) JP
 (21) Appl. No. 3-49170 (22) 20.2.1991
 (71) HITACHI MAXELL LTD (72) MASANOBU KIZU(3)
 (51) Int. Cl.⁵ H01M10/44, H02J7/02

PURPOSE: To prevent over-charge in the whole of a combination battery by making capacity of one storage battery smaller than those of the other storage

